WHAT IS CLAIMED IS:

1. An overcurrent protection circuit for a power switching transistor wherein the power switching transistor has a control electrode and two main electrodes, the circuit comprising:

a circuit including a protection switch for sensing the rate of change of voltage with respect to time at one of the main electrodes of the power switching transistor and for controlling the protection switch to remove a control signal to the control electrode of the power switching transistor to turn off the power switching transistor if the rate of change exceeds a predefined value.

2. The circuit of claim 1, wherein the sensing circuit comprises a capacitor coupled to a main electrode of the power switching transistor and a resistor coupled to receive a pulse from said capacitor and for developing a voltage across the resistor to turn on the protection switch if the voltage across the resistor exceeds the predefined value.

3. The circuit of claim 2, wherein the protection switch comprises a transistor.

4. The circuit of claim 3, wherein the protection switch comprises a bipolar junction transistor.

5. The circuit of claim 4, wherein the resistor is coupled across the base-emitter junction of the protection transistor.

6. The circuit of claim 4, further comprising a diode coupled across the base-emitter junction of the protection transistor to discharge the capacitor.

7. The circuit of claim 3, wherein the protection switch comprises a field effect transistor (FET).

8. The circuit of claim 1, wherein the power switching transistor comprises a field effect transistor (FET).

9. An overcurrent protection circuit for a power switching transistor wherein the power switching transistor has a control electrode and two main electrodes, the circuit comprising:

a circuit comprising a protection transistor, the circuit comprising an R-C circuit for sensing the rate of change of voltage with respect to time at one of the main electrodes of the power switching transistor and for controlling the protection transistor to remove a control signal to the control electrode of the power switching transistor to turn off the power switching transistor if the rate of change exceeds a predefined value.

10. The circuit of claim 9, wherein the R-C circuit comprises a capacitor coupled to a main electrode of the power switching transistor and a resistor coupled to receive a pulse from said capacitor and for developing a voltage across the resistor to turn on the protection transistor if the voltage across the resistor exceeds the predefined value.

11. The circuit of claim 10, wherein the protection transistor comprises a bipolar junction transistor.

12. The circuit of claim 11, wherein the resistor is coupled across the base-emitter junction of the protection transistor.

13. The circuit of claim 10, wherein the protection transistor comprises a field effect transistor (FET).

14. The circuit of claim 9, wherein the power switching transistor comprises a field effect transistor (FET).